

Date: Wed, 12 Jan 94 19:11:23 PST
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V94 #31
To: Info-Hams

Info-Hams Digest Wed, 12 Jan 94 Volume 94 : Issue 31

Today's Topics:

 * SpaceNews 10-Jan-94 *
 1274 clock chip
 An online repeater database
 BRAIN CANCER, LEUKEMIA FROM HAM RADIO
 DIPOLES FED BY LADDER LINE - Q (3 msgs)
 Fm Broadcast
 I need a terminal program for 2 TNCs at once
 Log Periodics and DXing
 Morse Code program
 Morse code program freeware or shareware answer.
 Portable 2m Antenna for Mountaineering???
 subscribe

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 12 Jan 94 04:36:02 GMT
From: news-mail-gateway@ucsd.edu
Subject: * SpaceNews 10-Jan-94 *
To: info-hams@ucsd.edu

On Mon, 10 Jan 1994, John Magliacane wrote:

>
> SB NEWS @ AMSAT \$SPC0110
> * SpaceNews 10-Jan-94 *
>

> BID: \$SPC0110

>

>

>

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SpaceNews

>

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>

>

MONDAY JANUARY 10, 1994

>

>

> SpaceNews originates at KD2BD in Wall Township, New Jersey, USA. It is
> published every week and is made available for unlimited distribution.

>

>

> * AO-16 NEWS *

> =====

> Recommended Operation Procedure to Reduce AO-16 Uplink Contention:

>

> 1993 has brought many new satellites and many new satellite users. It
> would be good to dust off an old AMSAT bulletin from 1991 to help refresh
> the "old-timers" procedures and to acquaint new users to the recommended
> uplink frequency usage.

>

> The AO-16 Command Team recommends that users of the AO-16 PBBS system
> use only uplink channel D (145.960 MHz) for download and directory requests
> leaving channels A, B, and C (145.900, 145.920, and 145.940 MHz) for file
> uploads and digi users.

>

> Stations uploading files should stay off of the download/directory/fill
> request channel D as their longer uplink packets will collide with the
> shorter request packets. Stations doing downloads and directories should
> stay off channels A, B, and C since their frequent but short requests will
> collide with longer uplink attempts seriously degrading uplink performance.
> Another benefit of using this procedure, while most of the uplink activity
> to AO-16 will be on channel D (145.960) this frequency is high enough in the
> passband of AO-13 that QRMing our fellow operators will be kept to a minimum
> when Pacsat crosses beneath AO-13's path.

>

> Recommended AO-16 operating practice in summary:

>

> Downlinks: 437.050 (also 2400.143 on experimenter's day.)

> Uplinks: 145.900 A uploads

> 145.920 B uploads

> 145.940 C uploads

> 145.960 D downloads, fills and directory requests

>

> [Info via WJ9F, AO-16 Command Team Leader]

>
>
> * NASA TV MOVED *
> =====
> NASA Select Television has moved to Spacenet 2, transponder 5, C band,
> 69 degrees west longitude, 3880.0 MHz, horizontal polarization, with audio
> on a 6.8 MHz subcarrier. NASA Select offers daily educational and
> information programming, carries shuttle launches and mission coverage,
> and occasionally airs live coverage of Shuttle Amateur Radio Experiment
> activity. The move occurred on 08-Jan-93 at 1500 UTC.
>
> [Info via ARRL]
>
>
> * NEW MIR CREW *
> =====
> By Serge Samburov, RV3DR
>
> Launch: 08.01.94 aboard SOYUZ-TM18 (crew #15)
> Docked at the port of "MIR" 10.01.94
> Undocked and launched to Earth cosmonauts V. V. Ziblyiv
> and A. A. Serebrov (crew #14) 14.01.94 aboard Soyuz TM17
>
> Crew #15:
> Viktor Afanasiev (commander) HAM #30, call U9MIR
> Yuri Usachev (flight engineer) HAM #31, call R3MIR
> Valerij Polyakov (doctor) HAM #32, call U3MIR
> Call packet: R0MIR
> Call PMS "MIR": R0MIR-1
> Call voice U3MIR, U9MIR, R3MIR, R0MIR op. Viktor, Valerij, Yuri
>
> =====
> # CALL NAME # CREW FLIGHT TIME
> =====
> 30 U9MIR VIKTOR AFANASIEV 15 08.01.94-04.07.94
> 31 R3MIR YURI USACHEV 15 08.01.94-04.07.94
> 32 U3MIR VALERIJ POLYAKOV 15/16/17 08.01.94-april 95
>
> Starting 01.01.93 the new QSL Manager for cosmonauts is RV3DR.
> I also confirm all QSOs with station MIR from 1988.
>
> RV3DR-Serge Samburov, Space "MIR" QSL Manager
> Chief of Cosmonaut Amateur Radio Department NPO "Energia"
>
> All QSLs should be sent to:
> P.O.BOX 73, Kaliningrad-10 city, Moscow Area, 141070, RUSSIA.
>
> Send me message via PKT: RV3DR#R#MIR or RV3DR@RK3KP.#MSK.RUS.EU

>
> Happy QSQ BEST 73 ***RV3DR***
>
> [Info via N2NRD]
>
>
> * GST UPDATE FOR 1994 *
> =====
> For those tracking satellites with BASIC programs that require sidereal
> time constants, here is the Greenwich Sidereal Time (GST) for January 0,
> 1994:
> G2 = 0.2761908
>
> You will need to replace this value in your program for element sets
> having Epoch years of 1994 and later. Don't forget that you can just use
> a date of 13/01/93, 13/02/93, ... until you get 1994 element sets.
>
> [Info via Dick, N3FKV]
>
>
> * FO-20 OPERATION SCHEDULE *
> =====
> The following is the current operating schedule for FO-20:
>
> ANALOG MODE:
>
> 12-Jan-94 7:30 -to- 19-Jan-94 7:50 UTC
> 26-Jan-94 8:20 -to- 02-Feb-94 6:50 UTC
> 09-Feb-94 7:15 -to- 16-Feb-94 7:40 UTC
>
> The digital (Mode JD) transponder is available at all other times.
>
> [Info via Kazu Sakamoto, JJ1WTK]
>
>
> * THANKS! *
> =====
> Thanks to all those who sent messages of appreciation regarding SpaceNews,
> especially:
>
> FB1RCI XE1KK VU2LBW VK3ZMF XX9AS Frank L. Weissferdt
>
>
> * FEEDBACK/INPUT WELCOMED *
> =====
> Mail to SpaceNews should be directed to the editor (John, KD2BD) via any
> of the following paths:
>

> FAX : 1-908-747-7107
> PACKET : KD2BD @ N2KZH.NJ.USA.NA
> INTERNET : kd2bd@ka2qhd.ocpt.ccur.com -or- kd2bd@amsat.org
>
> MAIL : John A. Magliacane, KD2BD
> Department of Engineering and Technology
> Advanced Technology Center
> Brookdale Community College
> Lincroft, New Jersey 07738
> U.S.A.
>
>
> <<=- SpaceNews: The first amateur newsletter read in space! -=>>
>
> /EX
>
> --
> John A. Magliacane, KD2BD * /\ /\ * Voice : 1-908-224-2948
> Advanced Technology Center |/\ /\ /\ | Packet : KD2BD @ N2KZH.NJ.USA.NA
> Brookdale Community College |/\ /\ /\ | Internet: kd2bd@ka2qhd.ocpt.ccur.com
> Lincroft, NJ 07738 * /\ /\ * Morse : -. -.. ...--- -.... -..
>

Date: Wed, 12 Jan 1994 05:43:00 GMT
From: swrinde!cs.utexas.edu!howland.reston.ans.net!agate!iat.holonet.net!svarbbs!
tom.perkins@network.ucsd.edu
Subject: 1274 clock chip
To: info-hams@ucsd.edu

>Does anyone out there know what the clock chip is for an
>MFJ 1274 TNC? This is a device that can be user installed
>so that the real time clock does not have to be set every
>time the unit is powered up. MFJ has one available for
>about 30 bucks...but if its a \$1.98 item from Digi-Key I'll
>buy it from them. Coming from MFJ I really don't think it
>can anything very special...Thanks

>Paul Anderson WB0ZRD at AT&T Bell Labs in Denver.

Paul - I came into this discussion late, so if you found the \$1.98 (or equivalent) part from somewhere else, could you let me know how much and where?

I will be putting my 1274 on line for HF packet forwarding in a few days and didn't know about the clock chip. Guess I don't have one now.

Thanks!

* OLX 2.1 TD * tom.perkins@arbbs.simivalley.ca.us (Tom Perkins KD6BXM)

Date: 12 Jan 94 17:26:51 GMT
From: ogicse!cs.uoregon.edu!usenet.ee.pdx.edu!fastrac.llnl.gov!cronkite.nersc.gov!
Greg.Chartrand@network.ucsd.edu
Subject: An online repeater database
To: info-hams@ucsd.edu

Can someone copy this file to an anonymous FTP site? My mailer won't
let me copy it, its too big.

Greg
WA9EYY

Date: 11 Jan 94 16:58:51 GMT
From: uwm.edu!news.moneng.mei.com!howland.reston.ans.net!news.intercon.com!
psinntp!newsserver.pixel.kodak.com!kodak!ornitz@rutgers.rutgers.edu
Subject: BRAIN CANCER, LEUKEMIA FROM HAM RADIO
To: info-hams@ucsd.edu

In article <1994Jan11.144946.25480@brtph560.bnr.ca> cnc23a@b4pph13e.bnr.ca
(Ken Edwards) writes:
>We have through research seen various effects on the body at various
>frequencies. Example, your microwave is set at a particular frequency that
>will excite water molecules, thereby creating heat.

This is a common misconception and one that needs to be corrected, especially
in regard to a discussion on how radio waves interact with living cells.

The lowest resonant absorption frequency for water (rotational spectra) is
22.235 GHz. Home microwave ovens in the United States operate at 2.45 GHz.
Industrial ovens often use 916 MHz. In Europe, other frequencies are often
used such as 433.9 and 896 MHz (UK), 2.375 GHz (former USSR), 3.39 GHz
(Netherlands), etc. None of these frequencies specifically excite water
molecules. Water has a high dielectric constant and high dielectric losses
from low frequencies to well into the microwave region (8 to 18 GHz depending
on many factors). Many other materials also are good absorbers of microwave
energy in this part of the spectrum: ethanol (drinking alcohol), methanol
(Wood alcohol), acetone (fingernail polish remover), ethylene glycol
(antifreeze), etc. Ice, however, is a relatively poor absorber of microwaves.
Many plastics such as Nylon and ceramics such as Steatite are also good
microwave absorbers at elevated temperatures (in fact Nylon and Steatite can

undergo thermal runaway). The frequency of 2.45 GHz was chosen by international agreement. It is a reasonable compromise of a number of factors: magnetrons are relatively inexpensive for this part of the spectrum, the absorption of most foods is high at this frequency yet not so high that penetration becomes a problem, and the dimensions of a multimode cavity cooking chamber are reasonable for most kitchens.

A good reference on how microwaves interact with materials is "Microwave Spectroscopy" by Townes and Schawlow. [This is the same Charles Townes of maser and laser fame.] A more practical reference is "Industrial Microwave Heating" by Metaxas and Meredith. I believe both of these books are still in print.

73, Barry WA4VZQ

```
-----
|      / /      | | Dr. Barry L. Ornitz           WA4VZQ
|      / /      | | Eastman Chemical Company
|    < < K O D A K | | ECC Research Laboratories, Engineering Research Div.
|      \ \      | | Process Instrumentation Research Laboratory
|    _ \ \ _     | | P. O. Box 1972, Building 167B
|    _ \ \ _     | | Kingsport, TN 37662 (615/229-4904, FAX 615/229-4558)
|    _ \ \ _     | | INTERNET:  ornitz@kodak.com
|      \ \      | |
|      / /      | |
|      / /      | |
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Eastman Chemical Company is no longer a part of Kodak. Until we have our own Internet connection, Kodak is graciously letting us continue to use theirs.

Date: 12 Jan 94 19:07:16 GMT
From: news-mail-gateway@ucsd.edu
Subject: DIPOLES FED BY LADDER LINE - Q
To: info-hams@ucsd.edu

Please excuse my laziness in not researching this myself...

I just bought an antenna tuner and want to put up a dipole fed by 450 ohm ladder line, for use across 160-10 meters. The longest one I have located commercially is one 135ft long with 100ft of feed line, for 80-10 meters (much cheaper, incidently, than building from scratch with current wire prices!). Anyone have an opinion on my going to ~260 ft (yes, I do have room), especially regarding performance on higher bands (40-10 meters).

Thanks for reading this, Brian WY2G

Date: 12 Jan 94 19:52:16 GMT

From: ogicse!uwm.edu!fnnews.fnal.gov!att-in!cbnews!wrb@network.ucsd.edu
Subject: DIPOLES FED BY LADDER LINE - Q
To: info-hams@ucsd.edu

In article <199401121918.LAA17597@ucsd.edu> MAYNARD@URIACC.URI.EDU writes:
>Please excuse my laziness in not researching this myself...

>
> I just bought an antenna tuner and want to put up a dipole fed
> by 450 ohm ladder line, for use across 160-10 meters. The longest
> one I have located commercially is one 135ft long with 100ft of
> feed line, for 80-10 meters (much cheaper, incidently, than building
> from scratch with current wire prices!). Anyone have an opinion
> on my going to ~260 ft (yes, I do have room), especially regarding
> performance on higher bands (40-10 meters).
>

> Thanks for reading this, Brian WY2G

If you are using a tuner, then 3 basic rules apply:

- 1) Make it as LONG as possible
- 2) Put it as HIGH as possible
- 3) Keep the feed line away from metal (6" or more)

If anyone tells you an antenna must be resonant to work well, punch them in the head.

--

Wally Blackburn Clinton-Gore - Socialist Leadership
wrb@ccsittn.att.com for the 90s!
Amateur Radio Station AA8DX I'm the NRA.
More people have died in Ted Kennedy's car than from my gun!

Date: 12 Jan 94 22:05:15 GMT
From: ogicse!emory!rsiatl!ke4zv!gary@network.ucsd.edu
Subject: DIPOLES FED BY LADDER LINE - Q
To: info-hams@ucsd.edu

In article <199401121918.LAA17597@ucsd.edu> MAYNARD@URIACC.URI.EDU writes:
>Please excuse my laziness in not researching this myself...

>
> I just bought an antenna tuner and want to put up a dipole fed
> by 450 ohm ladder line, for use across 160-10 meters. The longest
> one I have located commercially is one 135ft long with 100ft of
> feed line, for 80-10 meters (much cheaper, incidently, than building
> from scratch with current wire prices!). Anyone have an opinion
> on my going to ~260 ft (yes, I do have room), especially regarding
> performance on higher bands (40-10 meters).
>

Brian, going to 260 feet may not help much at all at 160 unless you can also get the antenna about 1/2 wave *high*, and that's typically not the case. It would present an easier impedance to match than the 135 footer at 160, but then you'd have a harder impedance to match at 80 meters because you'll have two halfwaves being end fed and that's an extremely high impedance point. 40-10 patterns are going to be a bunch of minor lobes anyway.

For an all band flattop, it's best to *not* make the antenna a resonant length for any of the ham bands. The reason is that on bands where the legs are halfwaves, or multiples of a halfwave, the feed point impedance is going to be extremely high. If you choose a length that's non-resonant, the impedance at the feed point will be complex, but not extreme, on any ham band. That works better with most tuners.

The classic 80-10 flattop has a length of 105 feet. That's non-resonant and works well with open wire feeders and a tuner. Doubling that to 210 feet could be useful to increase capture area and make it more efficient at 160. Performance at 12 and 10 meters could be somewhat worse with the 210 footer than the 105 footer because of the extra minor lobes.

If you want clean pattern gain on 40, 30, 20, 15, 12, or 10 meters, you're going to have to use a resonant design with the legs broken by stubs at the appropriate lengths for a band so that you have a series of broadside halfwaves fed in phase. It won't be a good all band antenna anymore because stubs for one band will be in the wrong place for other bands. There are better wire antennas than this, such as one of the various curtain antennas.

Gary

--

Gary Coffman KE4ZV		You make it,		gatech!wa4mei!ke4zv!gary
Destructive Testing Systems		we break it.		uunet!rsiatl!ke4zv!gary
534 Shannon Way		Guaranteed!		emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244				

Date: Tue, 11 Jan 1994 22:13:02 GMT
From: sdd.hp.com!vixen.cso.uiuc.edu!howland.reston.ans.net!cs.utexas.edu!oakhill!
spud!geraldg@network.ucsd.edu
Subject: Fm Broadcast
To: info-hams@ucsd.edu

In article 933@netcom.com, wa2ise@netcom.com (Robert Casey) writes:

> >In article <2d31e75a-5415rec.radio.amateur.misc@vpnet.chi.il.us>
akcs.marz@vpnet.chi.il.us (chris andersen) writes:
> >>Is it possible for a person with ham or modified ham set up to broadcast
> >>on the 88-108 Mhz area???
>
> Don't do this. the Funny Cookie Corporation goes after unlicensed broadcasters
> and issues fines as big as \$20K. And they might take your amateur license,
> too.

Do those "Mr. Microphone" products transmit in the FM broadcast band? Do those products have to be "type accepted", or is just a matter of limiting transmission power and signal type? Also, don't those "spy" transmitters radiate in the FM broadcast band? Is it just a matter of not transmitting under the authority of an Amateur radio license?

Regards,
Gerald

Gerald W. Garcia, P.E. N5UMB
Senior Design Engineer
geraldg@spud.sps.mot.com
(512) 891-2806 (voice)

Motorola Inc., MD: TX30/OE37
6501 Wm. Cannon Dr. West
Austin, TX 78735-8598
(512) 891-8315 (fax)

Date: Wed, 12 Jan 1994 13:56:31 GMT
From: caen!usenet.coe.montana.edu!netnews.nwnet.net!ns1.nodak.edu!plains!
gregg@uunet.uu.net
Subject: I need a terminal program for 2 TNCs at once
To: info-hams@ucsd.edu

Dave, I have had good luck with XPCOM. It is written by a guy out west, KB7XP, I think. You can hook up two tncs to two different comm ports and it will put the text from each one in a separate window. It wants to see either a PK232 or MFJ1278, but I have used kantronics tncs with it too. If you have two pk232s or aea tnc's it will use them in host mode. It is shareware, try and buy. One of our local guys sent a letter to the author with, I think, a bug report, and got a very nice note back, so the author is very responsive. What I'd like to find is a packet program that uses host mode for the MFJ tnc's. I wish I could tell you where to find a copy of xpcom, but if no one else can tell you, I'm pretty sure I have one around here somewhere, all zipped up and ready to go.

Joe, KN0A

DAVE CASE - KA1NCN (CASEDA@ECSUC.CTSTATEU.EDU) wrote:

: I am looking for a TERMINAL (not a logging) program that can handle
: two TNCs at once (one through each of two COM ports).
: Preferable FTP-able, but I can send you a disk if you have it.

: 73
: Dave/KA1NCN

: End of returned message

Date: Wed, 12 Jan 1994 09:10:23 GMT
From: swrinde!hopper.acm.org!natinst.com!cs.utexas.edu!sdd.hp.com!apollo.hp.com!
hpwin052!hpqmoa!dstock@network.ucsd.edu
Subject: Log Periodics and DXing
To: info-hams@ucsd.edu

The log-periodic is a specialist antenna for wideband, continuous frequency coverage. Their design is related to bandpass filter design, but in simplified terms, a passband is chosen, and then the number of elements per octave is chosen. The gain has ripples across the passband, rather as a Chebyshev filter has. Choosing the number of elements per octave sets the amplitude of the ripple. The return loss (another way of expressing impedance match, like VSWR) is a series of deep dips, having more elements per octave spaces these dips closer, and so the return loss is better between the dips... in other words, the VSWR varies cyclically across the antennas bandwidth, and the number of elements/octave sets the peak VSWR.

Log periodics can be made with high gain, if the number of elements/octave is made large, but for a 14-30 MHz antenna, this would be huge... you would be wasting elements and their associated boomlength to cover frequencies between the amateur bands and the space between bands is far, far wider than the bands.

The log periodic has had its gain/size sacrificed to give continuous coverage.

I find it interesting that this is fast becoming a fashionable antenna. They are certainly big and very impressive, but for the same gain as amateur bands only beams, far more boomlength and far more elements are necessary. People with log periodics seem to think them wonderful, but measurement and comparison of full size HF antennae is a major undertaking, and the subjective assessment of antennae is impossible due to the far greater variability of band conditions.

I hope this helps a little

Cheers

David GM4ZNX

(For adding WARC bands to high gain HF antennae, the multi-element quad seems a good starting point, loops for added bands have been nested inside existing triband quads by several people, and the results have sounded encouraging.)

Date: 12 Jan 94 21:33:25 GMT
From: ogicse!emory!swrinde!cs.utexas.edu!news.tamu.edu!furuta@network.ucsd.edu
Subject: Morse Code program
To: info-hams@ucsd.edu

In article <wy1zCJHG1J.1pt@netcom.com>, Scott Ehrlich <wy1z@netcom.com> wrote:
>
>On world.std.com, there is a C program for code in the directory:
>pub/hamradio/unix called superiormorse.shar.

Has anyone managed to eliminate the residual clicks that are generated along with the characters in the Sun version of this program (see comment in beepSun.c)? They are quite noticable, especially at higher speeds.

Also on my wishlist: a version of the program that would produce a Sun .au file for use by other programs.

--Rick
KE3IV

Date: Wed, 12 Jan 1994 23:51:44 GMT
From: uchdcc!uonce!buho!jcontrer@uunet.uu.net
Subject: Morse code program freeware or shareware answer.
To: info-hams@ucsd.edu

Date: 12 Jan 1994 11:25:46 GMT
From: munnari.oz.au!comp.vuw.ac.nz!newshost.wcc.govt.nz!
WALKER_D%ix.wcc.govt.nz@network.ucsd.edu
Subject: Portable 2m Antenna for Mountaineering???
To: info-hams@ucsd.edu

In article <2gv7jp\$3e0@netfs.dnd.ca>, mercer@dgs.dnd.ca (David Mercer) writes:

>I am an avid climber/backpacker etc and want to be able to use my HT in
>the backcountry. I require a design for an antenna (with better gain
>than my rubber duck) that is light, easily packable, and not too bulky,
>which will allow me to work repeaters in the 2m band. In case it
>matters, most (but not all) of the use will be from mountain tops.
>
>Obviously, a 1/2 wave diapole is a candidate but I was wondering if
>there are any others?
>
>How about a boom that can be disassembled? A flexable J pole? I would
>appreciate any and all suggestions.
>
>Thanks
>DAve
>|-----

I've been using a J-pole for years now.. it's made of 1/4 inch Al, and
breaks down into 3 x 1/4 wavelength sections. When I go tramping (hiking)
into areas where rptr coverage is marginal, I just strap the thing to the
side of my pack (slip it inside my compression straps). Takes less than
a minute to take it off the side of the pack and assemble it, and it
weighs next to nothing. The antenna has survived fairly rough treatment,
and is still going strong. I've decided that the extra hassles involved
in carrying a beam (ie extra weight and bulk) are not justified; the
J-pole is also easily repairable should any damage occur.
What I am now looking for is a rugged dual band antenna design (no radials)
that I can break down and throw onto the pack. Any suggestions??? Some of the
hills around here reflect UHF signals into the valleys much better thhan 2m
ones, though generally, attenuation in the bush on 70cm seems to be a lot
greater than at 2m.

cheers,
Dave, ZL2BHE.

Date: 13 Jan 94 02:47:05 GMT
From: news-mail-gateway@ucsd.edu
Subject: subscribe
To: info-hams@ucsd.edu

pease send me info. about ham radios and how to be an operator.

End of Info-Hams Digest V94 #31
